

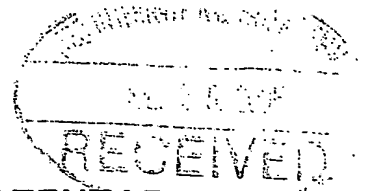
# PATENT COOPERATION TREATY


## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference FNTYA026WO		<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/JP2004/011184		International filing date (day/month/year) 26.07.2004	Priority date (day/month/year) 30.07.2003	
International Patent Classification (IPC) or national classification and IPC B60K28/16, B60L3/10, B60K6/04				
Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input checked="" type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  01.02.2005		Date of completion of this report  18.07.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Vogt-Schilb, G  Telephone No. +49 89 2399-8917		



INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITYInternational application No.  
PCT/JP2004/011184**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements**\* of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-32 as originally filed

**Claims, Numbers**

1-10 as originally filed

**Drawings, Sheets**

1/15-15/15 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing *(specify)*:
  - ☐ any table(s) related to sequence listing *(specify)*:
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing *(specify)*:
  - ☐ any table(s) related to sequence listing *(specify)*:

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/JP2004/011184

---

**Box No. II Priority**

---

1. ☒ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:  
☐ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).  
☒ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☐ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

---

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

---

1. Statement

Novelty (N)	Yes: Claims	4,5,7-9
	No: Claims	1-3,6,10
Inventive step (IS)	Yes: Claims	4,5,7-9
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V.**

1 The following documents are referred to in this communication:

D1 : EP 1 147 937 A (TOYOTA MOTOR CO LTD) 24 October 2001 (2001-10-24)

D2 : US 5 492 192 A (BROOKS LORAN D ET AL) 20 February 1996

D3 : EP 0 823 348 A (DELCO ELECTRONICS CORP) 11 February 1998

D4 : US 5 788 005 A (ARAI KENTAROU) 4 August 1998 (1998-08-04)

2 INDEPENDENT CLAIM 1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parenthesis applying to this document):

A vehicle driven by an electric motor (MG2) with a voltage converter (192)  
a slip detection module (272a) , upon detection of a slip (Fig 5) the motor torque  
is reduced according to the angular acceleration to set an initial torque value  
intended to cancel the slipping.

The examiner is of the opinion that the drive circuit 191, 192 represents implicitly a voltage converter, since the direct current of the battery 194 is converted into alternate current to drive the motor MG2. As disclosed on page 4 paragraph 0016, the transistors are switching elements for each phase. Thus a transformation of voltage from DC into AC is carried on in the inverter 192 in the same way as in the application.

The claim is unclear and is interpreted as follows. After detection of slip the torque is reduced and after increased to a preset torque to start the cancelation of torque reduction. This preset torque is set in response to the convergence of slip.

The prior art D1 anticipates this feature since it gives a curve of torque versus slip which is accepted to be represented by the angular acceleration. If the angular acceleration is reduced and hence if the slip converges, the torque is increased again to the Tmax value (fig. 7A).

3 INDEPENDENT CLAIM 10

Similarly for the same reasons, the present application does not meet the criteria of

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

PCT/JP2004/011184

Article 33(1) PCT, because the subject-matter of claim 10 is not new in the sense of Article 33(2) PCT.

**4     DEPENDENT CLAIMS 2, 3, 6**

Dependent claims 2, 3, 6 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).  
The features of these claims are disclosed in D1.